

REMARKS

The Office Action of August 12, 2005, has been carefully considered. Claims 9-15, 26, 27, 31, 34, and 37 are pending in the application. Claims 9, 26, 31, and 34 were rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent Number 5,132,964 to Esaki et al. (hereinafter the Esaki reference). Claims 10, 11, 12, 13, 14, 15, 27, and 37 were rejected under 35 U.S.C. §103(a) as being unpatentable over Esaki in view of Gunninberg et al., "How a Large ATM MTU Causes Deadlocks in TCP Data Transfers", IEEE/ACM Transactions on Networking, Vol. 3, Issues 4, (1995) (hereinafter the Gunninberg reference). In addition, Applicant has re-numbered the new claims that were added in the previous response filed on June 21, 2005. In that prior response, the new claims mistakenly used numbers that had been used for canceled claims (e.g., numbers 38-43). Even though the present Office Action did not object to this numbering, the Applicant has re-numbered these previously presented claims and marked them as NEW. However, after a telephone interview with the Examiner on November 1, 2005, amendments were requested by the Examiner. Therefore, the "NEW" claims illustrate strike-through text and underlined text for these requested amendments. Because each of the newly numbered claims was previously presented, the Applicant respectfully requests that these newly numbered claims be considered in the current response.

In overview, by the present amendment, Claims 9, 26, 31, 34, and 37 have been amended, the new claims added in the last response have been re-numbered as Claims 49-54, and the rejections have been traversed in view of the following

1 remarks that include a brief description of certain aspects of the invention and a
2 brief description of the teachings in the cited art.

3 **Telephone Interview Summary**

4 On November 1, 2005, the undersigned attorney (Marcia A. Tunheim) for
5 the Applicant and Examiner Hussein A. El-chanti held a telephone interview.
6 During the interview, the parties discussed the proposed amendments faxed to the
7 Examiner. It was agreed to further amend the claims by adding "through a
8 communication device" in the preamble and then later reference that
9 communication device in the claim for more clarity. In addition, the previously
10 submitted new claims with the incorrect claim numbering were discussed. The
11 Examiner agreed to review these claims and requested Applicant to amend Claims
12 51 and 54 to remove references to "itself" in order to overcome possible 35 U.S.C.
13 §112 rejection. In addition, Examiner requested Applicant to check any of the
14 new Claims that use a negative limitation. The parties agreed to the above
15 amendments.

16 **35 U.S.C. §102 Claim Rejections**

17 Claims 9, 26, 31, and 34 were rejected under 35 U.S.C. §102(e) as being
18 anticipated by the Esaki reference. In overview, in order for prior art to anticipate
19 a claim under 35 U.S.C. §102 every element of the claimed invention must be
20 identically disclosed either expressly or under principles of inherency in a single
21 reference. Further, the exclusion of a claimed element from a prior art reference,
22 no matter how insubstantial, is enough to negate anticipation by that reference.
23 The test of whether anticipation exists in a particular case is a question of fact, and
24 is applied element-by-element to a single prior art reference. Only if the prior art
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1 literally reads on every element of the rejected claim will the claimed invention be
2 anticipated under this test.

3 With this in mind, the Applicant analyzes the §102 rejections of the claims in
4 the present application. First, a brief summary of the present application and of the
5 Esaki reference is provided.

6 The present application is directed at techniques for performing a fast
7 dynamic measurement of bandwidth in a TCP network environment utilizing a single
8 pair of packets. (page 19, lines 12-13) A set of packets are sent followed by a large
9 "push" packet. The "push" packet forces the second packet to be transmitted instead
10 of having the second packet held in a buffer so that it can be sent with other packets.
11 (page 27, line 23 to page 28, line 2)

12 The Esaki reference discloses a packet communication exchanging apparatus
13 for transferring data packets across a common communication channel (i.e., bus or
14 trunk). One or more output modules receive the incoming packets from one or more
15 input modules. When it receives incoming data packets from the input modules via
16 the trunk, an output module temporarily stores the packets in a buffer. To prevent an
17 overflow of the buffer, the Esaki reference discloses an approach to stop or slow
18 down the sending of incoming data packets. Since the sending input module cannot
19 send a data packet when the trunk is "in use," the Esaki reference teaches to interfere
20 with the transmission of additional data packets when there is a threat of the output
21 module's buffer overflowing. To do this, the output module sends a "dummy
22 packet" over the trunk when the amount of data packets in the buffer reaches one or
23 more predetermined threshold values. The sole purpose of the dummy packet is to
24 cause "contention" on the trunk and therefore, prevents (at least temporarily) the
25 input module's ability to send more data packets.

1 The Examiner contends that the Esaki reference “teaches that the dummy
2 packet is sent to avoid overflow in the buffer and resulting in the discarding of the
3 packets.” The Applicant agrees with this contention. However, upon a closer
4 inspection of the portion cited by the Examiner, namely col. 11, line 55 to col. 12,
5 line 2, one will see that the Esaki reference further teaches that as a consequence to
6 the dummy packet, *“the packet transmitter does not transmit a new data packet to
7 the data bus so as to avoid a further packet contention”*. With these teachings, the
8 Applicant argues that the Esaki reference actually teaches away from the present
9 claimed invention because the “push” packet of the present application is sent to
10 push the second packet along. Page 27, line 23 to Page 28, line 2. In other words,
11 the present application sends the “push” packet to force the transmission of the
12 second packet so that the second packet is not buffered. Thus, the Applicant has
13 amended each of the independent Claims 9, 26, 31, 34, and 37 to more clearly clarify
14 this difference between the “push” packet and the “dummy” packet taught in the
15 Esaki reference. These independent claims now recite “wherein the push packet
16 forces the transmission of the set of packets by the communication device to avoid
17 the transmission delay caused by packet buffering by the communication device
18 on the network.”

19 Thus, the exclusion of one of these claimed elements from the Esaki
20 reference is enough to negate anticipation by that reference for all the present
21 independent claims (Claims 9, 26, 31, 34, and 37). Therefore, for at least the above
22 reasons, Applicant respectfully submits that the §102 rejection of Claims 9, 26, 31,
23 34, and 37 is improper, and respectfully requests reconsideration and withdrawal of
24 this rejection.
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2 **35 U.S.C. §103 Claim Rejections**

3 Claims 10, 11, 12, 13, 14, 15, 27, and 37 were rejected under 35 U.S.C.
4 §103(a) as being unpatentable over the Esaki reference in view of the Gunninberg
5 reference. The Applicant respectfully disagrees with this rejection for various
6 reasons. One of the reasons is, as discussed above, neither the Esaki reference nor
7 the Gunninberg reference teach or disclose the sending at least one “push” packet
8 to avert a transmission delay between packets in the set, wherein the “push” packet
9 forces the transmission of the set of packets as recited in each of the independent
10 claims from which these dependent claims depend. Thus, even if both of these
11 references could be combined, their teachings could not possibly suggest the
12 present invention. In addition, there is no suggestion or motivation to combine
13 these references. Each of the dependent claims also includes other limitations that
14 are not taught or suggested by the Esaki reference or Gunninberg reference.

15 Thus, the Applicant contends that the Esaki reference, whether considered
16 alone or with any permissible combination with the prior art of record, including
17 the Gunninberg reference, do not teach or suggest each limitation recited in
18 Claims 10, 11, 12, 13, 14, 15, 27, and 37. Therefore, the Applicant respectfully
19 submits that the §103 rejections of Claims 10, 11, 12, 13, 14, 15, 27, and 37 is
20 improper, and respectfully requests reconsideration and withdrawal of this
21 rejection.

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23 **Newly Numbered Claims**

24 As mentioned above, the claims that were added in the previously filed response
25 have been renumbered using numbers that have not been previously used for other

1 claims. Because these claims were previously presented in a prior response, these
2 claims should not be considered new. These “new” claims illustrate strike-through
3 text and underlined text to indicate amendments made to them after the telephone
4 interview. For example, claims 50 and 54 were amended to clarify that the
5 communication device may be a device other than the sending entity or the
6 receiving entity, as described in the present application on page 2, lines 4-6. Thus,
7 this amendment corrects a numbering mistake within our prior response. In
8 addition, because each of the newly numbered claims is dependent on one of the
9 existing independent claims, the Applicant respectfully submits that Claims 49 to
10 54 are allowable for at least the reasons discussed above.

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CONCLUSION

Applicant has considered the other references cited by the Examiner in the Office Action. None of these references appear to affect the patentability of Applicant's claims. By the foregoing remarks, Applicant believes that all pending claims 9-15, 26, 27, 31, 34, 37, and 49-54 are allowable and the application is in condition for allowance. Therefore, a Notice of Allowance is respectfully requested. Should the Examiner have any further issues regarding this application, the Examiner is requested to contact the undersigned attorney for the Applicant at the telephone number provided below.

Respectfully Submitted,

Dated: Apr. 3, 2005

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